

**REMARKS**

This amendment is responsive to the Office Action of March 24, 2009. Reconsideration and allowance of claims 2-7, 9-11, and 13-21 are requested.

**The Office Action**

Claims 1-7 and 9-16 stand rejected under 35 U.S.C. § 101.

Claims 1-7, 17, 20, and 21 stand rejected under 35 U.S.C. § 102 over Cooke (US 6,603,125).

Claims 1, 9-12, 18, and 19 stand rejected under 35 U.S.C. § 102 over Vernon (US 2005/0109958).

Claims 13-16 do not stand rejected over prior art and are understood to contain allowable subject matter once the 35 U.S.C. § 101 issues are resolved.

**The Claims Distinguish Patentably  
Over the References of Record**

Claim 13 has been placed in independent form and amended to address the 35 U.S.C. § 101 issues. Accordingly, it is submitted that claim 13 and claims 2-12 and 14-16 dependent therefrom now distinguish over the references of record.

Claim 17 has been amended to emphasize that the correction to the energy determination corrects temporal shift or delay errors in the digital sampling. By contrast, the technique Cooke corrects errors in energy in either analog or digital signals. Rather than correcting for digital sampling errors, Cooke corrects for pile-up, photomultiplier tube nonlinearity, and spatial issues. The Cooke technique being equally applicable to analog and digital processing, Cooke makes no suggestion to correct for digital sampling errors.

Accordingly, it is submitted that claim 17 distinguishes patentably over the references of record.

Claim 18 has been amended to emphasize the correction of energy. By contrast, Vernon is concerned with obtaining more accurate temporal information. Specifically, Vernon is concerned with PET systems. In PET systems, each positron event triggers a pair of gamma rays moving at substantially the speed of light in 180 degree opposite directions. Finding coincident pairs of gamma rays among the hundreds of thousands of generated gamma rays requires accurate timing

measurements. To improve timing accuracy, Vernon proposes to determine the slope of the relatively steep leading edge of each pulse. From the slope information, Vernon determines a time at which the pulse started. Because claim 18 focuses on correction of energy whereas Vernon focuses on the accurate determination of the time of the event, it is submitted that claim 18 and claim 19 dependent therefrom distinguishes patentably over the references of record.

Claim 20 is concerned with a system for reducing temporal shift errors between an analog pulse and a digital sampling interval. The Cooke technique is equally applicable to analog and digital measurements. Cooke is particularly concerned with applications where a plurality of pulses tend to overlap or pile-up and obscure one another which is a problem in SPECT images regardless whether the output of the PMTs is processed in analog or digital. Cooke does not address adjusting digital data to reduce temporal shift errors between an analog pulse and a digital sampling interval.

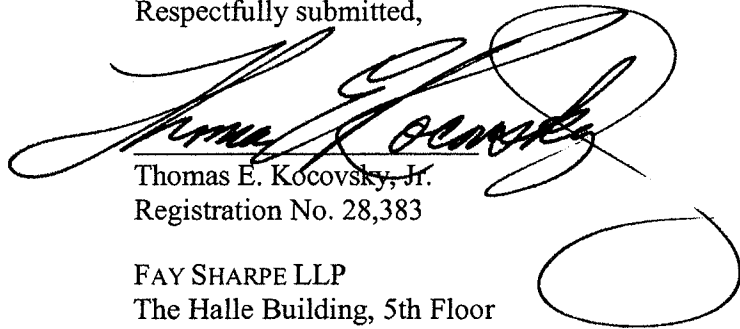
Accordingly, it is submitted that claim 20 and claim 21 dependent therefrom distinguish patentably over the references of record.

**CONCLUSION**

For the reasons set forth above, it is submitted that claims 2-7, 9-11, and 13-21 distinguish patentably and unobviously over the references of record. An early allowance of all claims is requested.

In the event the Examiner considers personal contact advantageous to the disposition of this case, the Examiner is requested to telephone Thomas Kocovsky at 216.363.9000.

Respectfully submitted,

A large, stylized handwritten signature in black ink, which appears to read "Thomas E. Kocovsky, Jr.", is written over the typed name and registration number.

Thomas E. Kocovsky, Jr.  
Registration No. 28,383

FAY SHARPE LLP  
The Halle Building, 5th Floor  
1228 Euclid Avenue  
Cleveland, OH 44115-1843  
Telephone: 216.363.9000 (main)  
Telephone: 216.363.9122 (direct)  
Facsimile: 216.363.9001  
E-Mail: [tkocovsky@faysharpe.com](mailto:tkocovsky@faysharpe.com)